



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/663,253

09/16/2003

Kenneth B. Gilleo

CED 6009

2863

321

7590

03/22/2005

SENNIGER POWERS LEAVITT AND ROEDEL  
ONE METROPOLITAN SQUARE  
16TH FLOOR  
ST LOUIS, MO 63102

EXAMINER

WILLIAMS, ALEXANDER O

ART UNIT

PAPER NUMBER

2826

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/663,253

Applicant(s)

GILLES, KENNETH B.

Examiner

Alexander O. Williams

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 25-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 25-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/6/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2826

Serial Number: 10/663253    Attorney's Docket #: CED 6009  
Filing Date: 9/16/2003;

Applicant: Gilleo

Examiner: Alexander Williams

Applicant's Amendment filed 1/6/05 to the election of Group I (claims 1 to 17), filed 7/22/04, has been acknowledged.

Claims 18-24 have been canceled.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

Initially, and with respect to claims 1, 3, 4, 13 and 29, note that a "product by process" claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); In re Fitzgerald, 205 USPQ 594, 596 (CCPA); In re Marosi et al., 218 USPQ 289 (CAFC); and most recently, In re Thorpe et al., 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that Applicant has burden of proof in such cases as the above case law makes clear.

Claims 1 to 17 and 25 to 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Chiu (U.S. Patent # 6,228,679 B1).

In claim and similar claim 29, for example, Chiu (**figures 1 to 13**) specifically **figures 1, 2 and 6** show an assembly **10** comprising a substrate **12**, an integrated circuit device **16**

adapted to be electrically and mechanically attached to the substrate and having a bottom surface and a side surface, electrically conductive connecting elements **22** between the device and the substrate that electrically connect the device and the substrate, and at least one adhesive body (**15 between 14 and 18**) positioned between the integrated circuit device and the substrate to form a connection between the circuit device and the substrate, said at least one adhesive body comprising a non-thermosetting material (**see column 4, lines 40-51**) which, when heated, releases said connection to allow removal of the circuit device from the substrate, the at least one adhesive body being in contact with said bottom surface and said side surface of the integrated circuit device.

2. The assembly as set forth in claim 1, Chiu show wherein said non-thermosetting material comprises a thermoplastic polymer.

5. The assembly as set forth in claim 1, Chiu show wherein said at least one adhesive body **15** is positioned at a peripheral edge of the integrated circuit device.

6. The assembly as set forth in claim 5, Chiu show wherein said circuit device has corners and the adhesive bodies are located at said corners.

7. The assembly as set forth in claim 1, Chiu show wherein said at least one adhesive body has a substantially spherical shape.

8. The assembly as set forth in claim 1, Chiu show wherein said at least one adhesive body comprises four adhesive bodies.

9. The assembly as set forth in claim 1, Chiu show wherein said integrated circuit device **16** is a chip package.

10. The assembly as set forth in claim 1, Chiu show wherein said integrated circuit device **16** is a multi-chip module.

11. The assembly as set forth in claim 1, Chiu show wherein said integrated circuit device **16** has a bottom surface with four corners and said at least one adhesive body **15** is located approximately equidistant from adjacent corners in contact with the bottom surface of the circuit device

12. For example, Chiu (**figures 1 to 13**) specifically **figures 1 and 2** show an assembly comprising: a substrate **12**, an integrated circuit device **16** adapted to be electrically and mechanically attached to the substrate and having a bottom surface and a side surface, electrically conductive connecting elements **22** between the device and the substrate that electrically connect the device and the substrate, and at least two adhesive bodies (**15 between 14 and 18**) comprising a non-thermosetting material positioned between the integrated circuit device and the substrate to form a releasable connection **15**

Art Unit: 2826

between the circuit device and the substrate, the at least one adhesive body being in contact with said bottom surface and said side surface of the integrated circuit device.

14. The assembly as set forth in claim 12, Chiu show wherein said at least two adhesive bodies **15** are spaced apart to form an open space between the adhesive bodies.

15. The assembly as set forth in claim 12, Chiu show wherein said at least two adhesive bodies **15** are positioned at a periphery of the integrated circuit device .

16. The assembly as set forth in claim 12, Chiu show wherein said integrated circuit device **16** has corners and the at least two adhesive bodies **15** comprise four adhesive bodies positioned at said corners.

16. The assembly as set forth in claim 12, Chiu show wherein said integrated circuit device **1** has corners and the at least two adhesive bodies **15** comprise four adhesive bodies (**one 15 can be the four**) positioned at said corners.

17. The assembly as set forth in claim 12, Chiu show wherein said at least two adhesive bodies **15** comprise a thermoplastic polymer.

As to the grounds of rejection under section 103, see MPEP § 2113.

## Response

Applicant's arguments filed 1/6/05 have been fully considered, but are moot in view of the new grounds of rejections detailed above.

The insertion of Applicant's additional claimed language, for example, "claims 1,12 and new claims 29-30" cause for further search and consideration to make this action final.

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT

Art Unit: 2826

MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

The listed references are cited as of interest to this application, but not applied at this time.

Field of Search	Date
U.S. Class and subclass: 257/778,734,737,738,787,788 428/343,355 R,347	10/4/04 3/16/05
Other Documentation: foreign patents and literature in 257/778,734,737,738,787,788 428/343,355 R,347	10/3/04 3/15/05
Electronic data base(s): U.S. Patents EAST	10/3/04 3/16/05

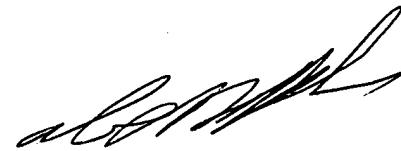
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander O Williams whose telephone number is (571) 272 1924. The examiner can normally be reached on M-F 6:30AM - 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272 1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2826

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AOW  
3/16/05



Alexander O Williams  
Primary Examiner  
Art Unit 2826